



No. 931	Author Steven E. Backs, Wildlife Research Biologist	Date 5/01/07
	Title Wild Turkey Population Indices - Spring, 2007.	

Abstract: The mean number of wild turkeys heard along 10 roadside counts during 27 March – 18 April 2007 was 0.80 gobblers heard per stop, a 45% decrease compared to the gobbling index of 1.45 in 2006. The long-term trends show a steady increase since 1987. The substantial 45% decrease in the gobbling index in 2007 primarily reflects the record low production in 2005 resulting in a low number of vocal 2-yr-old gobblers as compared to the high number of 2-yr-olds noted in the 2006 gobbling indices resulting from the record high 2004 summer brood production.

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Gobbler counts are conducted annually during late-March- April to determine the relative population trends of wild turkeys in the areas surveyed. In 2007, 10 traditional areas were surveyed in portions of 14 counties. Roadside gobbler trend routes were conducted in conjunction with roadside trend routes for ruffed grouse. Each route has 15 predetermined listening stops along 10-20 miles of rural roadways. The average number of gobblers heard on 10 roadside trend routes ranged from 0.27 to 1.53 gobblers heard per stop (**Table 1**). Overall, an average of 0.80 gobblers were heard per stop in 2007 which was 45% less than the number heard in 2006. The substantial decrease from 2006 to 2007 gobbling indices reflects the substantial difference in the record high 2004 and record low 2005 summer brood production that dramatically influenced the proportion of 2-yr-old gobblers in the age structure of the population.

While roadside routes are not accurate indicators of annual trends in wild turkey populations, they provide some long-term (5 yrs) trends for a specific area and provide information to compare areas relative to each other (**Table 2**). Weather conditions during the survey period can contribute to the variability of annual trends. Annual variations may also reflect the proportion of 2-year-old gobblers in the population rather than actual population trends over the long term. The substantial increase in the 2006 gobbling index is a prime example where the record high summer brood production in 2004 (Backs 2006) became quite evident (**Figure 1**). The substantial decrease in the gobbling indices from 2006 to 2007, in turn, reflects the substantial difference in the record high 2004 and record low 2005 summer brood production. The 21 survey years represent a period of time when most turkey populations were undergoing steady growth. As wild turkey populations mature and population growth stabilizes, the gobbling count indices will begin fluctuating above and below a long- term mean unless habitat conditions or harvest strategies change the impact of environmental influences.

Literature Cited

Backs, S. E. 2006. Wild turkey brood production – Summer 2005. Wildlife Management and Research Note #910. Indiana Division of Fish and Wildlife, Indianapolis. 5pp.; or see

<http://www.in.gov/dnr/fishwild/publications/notes/Turkey%20Brood%20Production%20Survey%202005.pdf>



Table 1. Wild turkeys heard on roadside counts in Indiana between 27 March - 18 April 2007.

County/Area	No. of Routes/ Stops	No. of Repetitions (for/rev)	Total Turkeys Heard	Total Seen	Highest Number Heard/Rt.	Turkeys Heard ^{1/} Per Stop	
						2007	2006
Jackson, Brown, Monroe (Hickory Ridge, USFS)	1/15	2	17	0	16	1.07	2.67
Owen-Putnam	1/15	2	3	0	3	0.20	0.60
Perry Co. (Oriole-St.Croix-USFS)	1/15	2	22	0	15	1.00	0.93
Washington State Forest	1/15	2	16	1	12	0.80	0.73
Lawrence & Orange (Lost River - E, USFS)	1/15	2	16	14	9	0.60	1.60
Martin & Orange (Lost River - W, USFS)	1/15	2	30	0	16	1.07	2.27
Morgan-Monroe State Forest	1/15	2	17	4	11	0.73	0.53
Greene	1/15	2	4	5	4	0.27	1.53
Orange (Little Fork, USFS)	1/15	2	18	7	11	0.73	1.47
Jefferson	1/15	2	32	0	23	1.53	2.20
Means						0.80	1.45

^{1/} Indices calculated using route with highest count.

Table 2. Wild turkey roadside gobbling counts during April in Indiana from 1987 to 2007.

Year	Gobblers Heard Per Stop *										YEAR MEAN
	HICKORY	OWPUT	PERRY	WASH	LR-EAST	LR-WEST	MORGAN	GREENE	LICKCR	JEFFERSON	
1987	1.10	0.07	0.00	0.20	0.53	NR	0.27	0.00	0.00	1.00	0.35
1988	0.73	0.13	0.13	0.00	0.47	NR	0.20	0.07	0.00	1.13	0.32
1989	1.13	0.00	0.21	0.00	0.87	NR	0.20	0.00	0.47	0.73	0.40
1990	0.80	0.13	0.20	0.00	1.00	1.27	0.27	0.07	0.73	0.53	0.50
1991	0.33	0.20	0.40	0.00	0.87	0.53	0.33	0.07	0.87	1.07	0.47
1992	0.73	0.07	0.20	0.00	0.80	1.87	0.00	0.07	0.67	0.53	0.49
1993	0.47	0.00	0.47	0.00	0.27	0.53	0.07	0.20	0.47	1.20	0.37
1994	0.53	0.13	0.47	0.00	0.73	0.27	0.13	0.27	0.80	0.80	0.41
1995	0.67	0.00	0.80	0.00	0.93	0.73	0.00	0.13	0.80	1.53	0.56
1996	1.13	0.33	0.80	0.07	0.60	1.47	0.27	0.13	0.53	0.80	0.61
1997	0.67	0.20	0.87	0.07	0.73	0.47	0.47	0.00	0.60	0.93	0.50
1998	1.40	0.27	0.47	0.40	0.60	0.53	0.33	0.67	0.27	0.80	0.57
1999	0.80	0.60	0.47	0.27	1.27	0.53	0.67	0.40	0.87	1.20	0.71
2000	0.60	0.20	0.53	0.67	1.27	0.47	0.27	0.67	1.20	1.33	0.72
2001	0.73	0.53	0.60	0.60	0.67	0.73	0.33	0.33	0.93	1.73	0.72
2002	0.33	0.60	0.53	0.80	1.27	0.93	0.53	0.20	1.13	1.33	0.77
2003	0.53	0.20	0.60	1.47	1.07	0.67	0.80	0.60	1.00	2.13	0.91
2004	0.80	0.20	1.07	1.33	0.87	0.73	1.33	0.60	1.00	1.87	0.98
2005	0.93	0.27	0.87	1.20	1.07	1.47	0.33	0.60	0.80	1.47	0.90
2006	2.67	0.60	0.93	0.73	1.60	2.27	0.53	1.53	1.47	2.20	1.45
<i>Cumm. Mean</i>	<i>0.85</i>	<i>0.24</i>	<i>0.53</i>	<i>0.39</i>	<i>0.87</i>	<i>0.91</i>	<i>0.37</i>	<i>0.33</i>	<i>0.73</i>	<i>1.22</i>	<i>0.64</i>
<i>5 Yr Mean</i>	<i>1.05</i>	<i>0.37</i>	<i>0.80</i>	<i>1.11</i>	<i>1.17</i>	<i>1.21</i>	<i>0.71</i>	<i>0.71</i>	<i>1.08</i>	<i>1.80</i>	<i>1.00</i>
2007	1.07	0.20	1.00	0.80	0.60	1.07	0.73	0.27	0.73	1.53	0.80

*

= Indices calculated using route with highest count.

HICKORY = Hickory Ridge (USFS), Lawrence and Jackson Counties

OWPUT = General area of Owen-Putnam St. Forest

PERRY = northern portion of Perry Co.(USFS)

WASH = general area of Jackson-Washington St. Forest in Washington County

LR-EAST = Lost River Unit - East, USFS, Lawrence and Orange Counties.

YEAR MEAN = Arithmetic average value for all routes for a respective year (row).

SE = standard error of annual (row) mean

Cumm. Mean = Cumulative mean for a particular route.

5 Yr Mean = mean for 5 years previous to survey year.

MORGMON = general area of Morgan-Monore St. Forest in Morgan county.

GREENE = eastern Greene County

LICKCR = Lick Creek Area, USFS, in Orange County.

JEFFERSON = Jefferson County

LR-WEST = Lost River Unit - West, USFS, Orange and Martin Counties.

Figure 1. Roadside Gobbling Indices

